

HANDBOOK OF PHONOLOGICAL DATA
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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245 Armenian	245 Armenian	245 Armenian
245 01 p [b] ⁶⁰ [b-half-voice] ⁶¹ [p-aspirated-weak] ^{02 62}	14 t/s-hacek-aspirated ^{03 06} 15 t/s-hacek-ejective ^{05 06} 16 f ³⁰ (loan) 17 v [w] ⁶³ (free) 18 s ⁶⁴ (tag(-),free) */t/s/ 19 z ^{60 64} (tag(-),free) */t/s/ 20 s-hacek ^{06 64} (tag(-),free) */t/s-hacek/ 21 z-hacek ^{06 60 64} (tag(-),free) */t/s-hacek/ 22 x-uvular ⁰⁷ 23 m 24 n [ɛŋ] ⁶⁵ 25 l [l-velarized] ⁶⁶ [l-syllabic] ⁶⁷ (free) 26 r-fricative-retroflex ⁰⁹ [r-approximant-retroflex] ⁶⁸ [r-fricative-retroflex-voicel ess] ⁶⁹ (free) [r-fricative-retroflex-half-v	oice, 0 (free) [r-flap] ⁷¹ (free) 27 r-approximant-uvular ¹⁰ [r-approximant-uvular-voicel ss] ^{12 72} 28 r-trill ^{13 14} 29 h ¹⁵ [h-voice] ⁷³ (free) 51 i 52 yod/e-mid ¹⁶ [e-mid] ⁷⁴ [yod/epsilon] ⁷⁵ 53 schwa ³¹ (transitional) [e-dot-fronted] ⁷⁶ [epsilon-dot-backed] ⁷⁷ 54 a [alpha-unrounded] ⁷⁸ 55 u [u-trema] ⁷⁹ 56 o-mid [o] ⁸⁰ 57 yod 58 schwa-glide ³² (transitional)
245 02 p-aspirated ⁰³		
245 03 p-ejective ⁰⁵		
245 04 t [d] ⁶⁰ [d-half-voice] ⁶¹ [t-aspirated-weak] ^{02 62}		
245 05 t-aspirated ⁰³		
245 06 t-ejective ⁰⁵		
245 07 k [g] ⁶⁰ [g-half-voice] ⁶¹ [k-aspirated-weak] ^{02 62}		
245 08 k-aspirated ⁰³		
245 09 k-ejective ⁰⁵		
245 10 t/s *[s] *[z] [d/z] ⁶⁰ [d/z-half-voice] ⁶¹ [t/s-aspirated-weak] ^{02 62}		
245 11 t/s-aspirated ⁰³		
245 12 t/s-ejective ⁰⁵		
245 13 t/s-hacek ⁰⁶ *[s-hacek] *[z-hacek] [d/z-hacek] ⁶⁰ [d/z-hacek-half-voice] ⁶¹ [t/s-hacek-aspirated-weak] ^{02 62}		
245 \$a Armenian \$d Indo-European \$e SW USSR (Armenian SSR) \$f 4 million \$g Merritt Ruhlen \$g Marilyn Vihman (review)		
245 \$a Allen, W. S. \$b 1950 \$c "Notes on the phonetics of an Eastern Armenian speaker" \$d Transactions of the Philological Society, 180-206 \$g Oxford: Blackwell \$q 1 informant \$r 12 sessions with native speaker		
245 \$a LONG CONSONANTS \$A "Geminated consonants are rare, and are largely to be accounted for by morphological junctions." (p.188) Examples are given for long /t/, /r-fricative-retroflex/, /r-approximant-uvular/, /n/, and /l/.		
245 \$a LONG VOWELS (NON-DISTINCTIVE) \$A Vowels in stressed syllables are generally longer than those in unstressed syllables. "Armenian does not make distinctive use of vowel-length, which is subject to considerable variation." (p.183)		
245 \$a LOWERED PITCH (NON-DISTINCTIVE) \$A Vowels have lower pitch and "stronger breath force" after the unaspirated stops and affricates. (p.200)		
245 \$a NASALIZED VOWELS \$A "Vowels in contact with nasals are subject to varying degrees of nasalization, and in rapid utterance the words [written] 'em' '(I) am' and 'en' '(they) are' were both realized as [e-nasalized]."		

- 245 \$a RETROFLEXED VOWELS (NON-DISTINCTIVE) \$A A vowel is retroflexed when followed by a long or word final /r-fricative-retroflex/, or when a following /r-fricative-retroflex/ is part of a stressed syllable.
- 245 \$a STRESS \$A "Word stress is generally on the last syllable whose nucleus is other than /schwa/.... In words of more than three syllables there is a secondary stress on the initial syllable." (p.183)
- 245 \$a SYLLABLE \$A (C)(C)V(C)(C) \$A initial CC: stop + /yod, v, r-fricative-retroflex, r-trill, l, n,/; also in word initial position /s/ + /m, l/ with optional /schwa/, and some instances of /s, z/ + stop (p.182, 187) \$A final CC: first C is a continuant (p.182)
- 245 02 \$A "The tenseness and aspiration of [the weakly aspirated] stops is markedly less than that of the fully aspirated stops and affricates. ...At the reduced speed of utterance the light aspiration did not occur medially." (p.203)
- 245 03 \$A "Aspiration is strong in all positions" for the aspirated stops and affricates, which are markedly tenser than the unaspirated plain stop series. (p.188)
- 245 05 \$A "In the ejective series, the glottal plosion is never very strong, and is weakest at the commencement of a medial unstressed syllable; in some such cases it might in fact be more accurate to speak of it as potentially rather than actually present, being audibly realized only in careful utterance. At the commencement of initial and stressed syllables, however, glottalization is clearly present, and is particularly marked (though not violent) in final position." (p.188)
- 245 06 \$A "In the palatoalveolar class all articulations were accompanied by marked lip-protrusion, tending to produce a low-frequency acoustic effect in the fricatives and the fricative element of the affricates." (p.188)
- 245 07 \$A /x-uvular/ varies "from velar to post-velar according to following vowel; in final and preconsonantal position post-velar." (p.195) It is "generally accompanied by considerable scrape." (p.195)
- 245 09 \$A "Retroflexion and friction are most marked when [r-fricative-retroflex/] is (1) final, (2) geminated, (3) in a stressed syllable." (p.195)
- 245 10 \$A /r-approximant-uvular/ varies "from uvular to pre-uvular." It is "generally articulated without scrape." (p.196)
- 245 12 \$A In at least one word [r-approximant-uvular-voiceless] was distinguished from /x-uvular/ principally by its lack of scrape. (p.196)
- 245 13 \$A /r-trill/ is "strongly rolled." (p.197)
- 245 14 \$A /r-trill/ has "velar resonance." (p.193)
- 245 15 \$A The voicing of /h/ "varied in the same word from utterance to utterance." (p.196)
- 245 16 \$A /yod/e-mid/ has "slight front raising," as distinguished from the greater muscular tension and constriction of /yod/. (p.190)
- 245 30 \$A /f/ "occurs only in foreign loans and proper-names." (p.194)
- 245 31 \$A "/schwa/...is never fully stressed or lengthened. ...In medial position it is in all cases to be treated as 'anaptyctic' and related to the composition of permitted consonant groups. Its non-phonematic nature is signaled by its omission in the Armenian spelling.... In some cases its use appears to be optional." (p.185)
- 245 32 \$A Front vowels have a centering off-glide /schwa-glide/ before /r-approximant-uvular/.
- 245 60 \$A The unaspirated stops and affricates are voiced when preceded by a nasal.
- 245 61 \$A The unaspirated stops and affricates are voiced with voiceless release in final position after a vowel. (There may also be some voicing intervocally.) (p.200)
- 245 62 \$A The unaspirated stops and affricates are lightly aspirated in word final position after /r-fricative-retroflex/.
- 245 63 \$A In rapid speech /v/ in intervocalic position is sometimes realized as a semivocalic glide [w].
- 245 64 \$A After nasals and /r-fricative-retroflex/ the unaspirated affricates are liable to lose their stop element in rapid speech.
- 245 65 \$A /n/ is realized as [ɲ] before a palatoalveolar or velar consonant.

- 245 66 \$A /l/ is velarized word-finally.
- 245 67 \$A Between consonants the sequence /schwa.l/ is sometimes reduced to [l-syllabic].
- 245 68 \$A /r-fricative-retroflex/ is realized as an approximant word-initially and before an unstressed vowel.
- 245 69 \$A /r-fricative-retroflex/ is generally devoiced after /t-aspirated/, or before a voiceless stop or affricate.
- 245 70 \$A /r-fricative-retroflex/ may be partly devoiced word-finally.
- 245 71 \$A /r-fricative-retroflex/ is often realized as [r-flap] intervocalically in fast speech.
- 245 72 \$A /r-approximant-uvular/ is generally devoiced before a voiceless stop or affricate.
- 245 73 \$A /h/ is generally voiced intervocalically.
- 245 74 \$A /yod/e-mid/ loses its on-glide when it follows a palatoalveolar or precedes or follows /r-approximant-uvular/ (and in some cases, /r-trill/), except after velars.
- 245 75 \$A /yod/e-mid/ is realized as [yod/epsilon] before "-n."
- 245 76 \$A /schwa/ is raised and fronted in contact with palatoalveolar affricates and fricatives.
- 245 77 \$A /schwa/ is lowered and backed in word initial position before nasals.
- 245 78 \$A /a/ is backed in the vicinity of velar and uvular consonants.
- 245 79 \$A /u/ is fronted in immediate contact with a front vowel or /yod/.
- 245 80 \$A /o-mid/ is realized as [o] in the vicinity of the palatoalveolar affricates.